

## REMARKS

In the outstanding Office Action, Claims 1 to 8 were presented for examination. Claims 3-8 were rejected on formal grounds under 35 U.S.C. §112. In addition, rejections were advanced on the basis of 35 U.S.C. §103 against Claims 1 - 8 as being unpatentable over the admitted prior art.

The Office Action has been most carefully studied. In this amendment applicant has added new Claims 9-26. In addition, Claims 3 and 6 have been amended. The new and amended Claims have been carefully written to avoid any questions under 35 U.S.C. §112, in accordance with the guidelines and requirements set forth in the outstanding Office Action. Accordingly, as will be discussed in detail below, it is believed that the application is clearly in condition for allowance.

Maca per se is not a particularly appealing flavor to the western palate. Therefore, it is important for maca to be incorporated into a mixture with other ingredients, masking the flavor and texture of the maca to varying degrees, if a non-Peruvian is going to consume adequate quantities of maca to gain the health benefits commonly attributed to maca. It has been found that even a small amount of traditional grain flour, mixed with maca can mask the flavor of the maca sufficiently enough to make it palatable to a non-Peruvian. However, even when mixed with a "traditional" flour, maca does not function as the "traditional" flour would, e.g. having the ability to form a dough that stays together by just adding water. So if maca is added to traditional flour and water, when cooked the maca is released from the mixture and

travel to the surface. This would increase the sensation of maca's unpleasant flavor to the consumer. To remedy this problem, experimentation has shown that by adding egg whites to the mixture, the maca remains bound, and the mixture unexpectedly produces a very elastic dough. This elastic dough is useful for many food items, such as pasta where the springy texture of the resultant pasta creates a pleasant sensation in the mouth of the consumer. This pleasant feeling making the maca enhanced item more palatable, without the traditional flavor.

As disclosed in the application, maca provides many health benefits, both to humans and animals. Its uses have been long touted in the Puna Region of Peru. Maca has a high protein content and has traditionally been used for such disorders as anemia, menstrual disorders, fertility and to enhance memory, just to name a few. Billions of dollars are spent every year in the United States on protein replacement items, supplements and nutraceuticals to treat such disorders for both humans and animals. By providing food items with maca added, Americans can increase their protein consumption while getting the other health benefits, just by eating foods they normally eat, but where maca has been added or substituted for another ingredient. Further, with the consumption of carbohydrates linked to diabetes mellitus, and diabetes at epidemic proportions in the United States and other industrialized countries, the high protein content provides a very useful purpose.<sup>3</sup>

Further, the Puna region of Peru where maca is grown is in severe economic depression. People of these areas use land to grow economically favorable crops, that

have become social ills over the world. By having a new economically favorable use for the land, specifically the growing of maca, Peru's economy can be helped in a socially conscious manner.

### *Specification*

The specification has been amended to address various minor issues.

### *Claim Rejections - 35 U.S.C. §112 Indefiniteness*

Turning now to the rejection of Claims 3 - 8, applicant has corrected the indefiniteness as noted by the Examiner by amending Claims 3 and 6 to remove the narrower statements. The limitations recited by the narrower statements are now in new Claims 9, 10, 22 and 23.

### *Claim Rejections - 35 U.S.C. §103 Unpatentability*

Turning now to the rejection of Claims 1-8 as being unpatentable over the admitted prior art, Claims 1-8 and new Claims 9-26 are believed to clearly and patentably distinguish from the admitted prior art as will be described in more detail below.

More specifically, turning to Claims 1, 3 and 6 and their respective dependent Claims, as noted by the Examiner on page 3 of the present Office Action, "Claim 1 differs from the reference in that the product is to be a shaped solid food product. Although a capsule is a shaped solid, it is not a food product. It would not be obvious

to make such a food product from a root tuber such as maca, since in the food product maca is substituted for a traditional ingredient, in whole or in part (page 8 lines 7 - 8), such as traditional grain flour. The addition of the maca changes the physical and mechanical properties of the mixture of ingredients, including elasticity of the mixture, which can lead to variations in rising times, mixing techniques, and baking times and temperatures (if necessary), just to name a few. Maca can also adversely affect taste, texture and consistency of the end food product, leaving it unpalatable. Therefore, it would not have been obvious to add maca in effective amounts to a solid shaped food product.

Further, as disclosed on page 5 lines 14 - 20, "Surprisingly, shaped food products can be provided which contain nutritionally effective quantities of maca yet which have structural integrity and good consistency when dried or cooked and are palatable, or indeed flavorful. Though maca powder is a preferred form of maca for incorporation in foodstuffs, pursuant to the invention, and maca powder has flour-like consistency, cooking tests of maca powder mixed with water suggest maca lacks the desirable cooking characteristics of wheat flour" (Page 5 lines 14 - 20), however, maca combined with egg whites exhibit significantly more elasticity than the water based dough, leading to the theory that maca must permit cross-linking of the egg white albumins (page 20 line 43 - page 21 line 4), a new, unexpected and useful function, especially when a lighter bread is desired. Therefore, use of maca flour with egg white has provided an unexpected result and is therefore not obvious.

Further, referring specifically to Claims 3 and 6, although it may be well known to package a product, due to the physical and mechanical characteristics of the maca, instructions on the recommended use of maca, and the quantities to get desired health benefits would not be obvious. Due to the unappealing smell, taste and texture of maca, people would tend to minimize their use of maca in food products, therefore the lower limits of usage are integral to the marketing of the product for beneficial use.

### *Dependent Claims*

Claims 2, 11 - 21 depend from base Claim 1, and are therefore allowable with Claim 1 for the reasons that Claim 1 is allowable. Dependent Claims 2, 11, 12 - 21 are furthermore clearly and patentably distinguished from the art of record, and therefore allowable, by the additional meaningful limitations they recite.

More particularly, Claim 2 specifically recites a shaped solid food product as in Claim 1 where the maca is cooked into the food product, which is not remotely suggested by the admitted prior art or any of the other art of record in this application. The prior art shows uses of fresh and dried maca to create a slurry like drink or pudding, however, the prior art does not disclose combining maca with other traditional ingredients to create cooked foods such as breads, cookies and pasta. Further, due to the unpalatable taste, smell and texture to non-Peruvians, this use would not even be suggested by the prior art. The production of a shaped solid food product allows the consumer to ingest maca in a commonly recognizable form, and in sufficient quantities to reap the health benefits of the maca. Therefore, Claim 2 is allowable with Claim 1 for

the reasons that Claim 1 is allowable, and the additional meaningful limitation that it recited.

Claim 11 specifically recites a shaped solid food product as in Claim 1 where the food product containing the maca is formed into a meal replacement bar or snack bar, which is not remotely suggested by the admitted prior art , or any of the other art of record in this application. The prior art shows uses of fresh and dried maca to create a slurry like drink or pudding, however, the prior art does not disclose combining maca with other ingredients to create a meal replacement or snack bar. Further, due to the unpalatable taste, smell and texture to non-Peruvians, this use, including maca in therapeutically useful concentrations, would not even be suggested by the prior art. The production of a meal replacement or snack bar allows the consumer to ingest maca in a commonly recognizable form and time efficient manner, in sufficient quantities to reap the health benefits of the maca and provide a good source of protein. Therefore, Claim 11 is allowable with Claim 1 for the reasons that Claim 1 is allowable, and the additional meaningful limitation that it recited.

Claim 12 clearly recites a shaped solid food product as in Claim 1 where the food product containing the maca is intended for consumption by fish or animals, which is not remotely suggested by the admitted prior art , or any of the other art of record in this application. The prior art shows uses of fresh and dried maca to feed animals, the use is limited to the fresh maca, or the grain like dried tubers, and there is no mention of forming the maca containing food product into a shaped food item. The production of a

shaped solid food product allows the consumer to feed their animals and fish maca in a commonly used and recognizable form, in sufficient quantities for the animal/fish to reap the health benefits of the maca. Therefore, Claim 12 is allowable with Claim 1 for the reasons that Claim 1 is allowable, and the additional meaningful limitation that it recited.

Moreover, Claims 13 and 14 specifically recite a shaped solid food product as in Claim 1 where the food product containing the maca is intended for consumption by fish and animals during breeding and rearing, which is not remotely suggested by the admitted prior art, or any of the other art of record in this application. The production of a shaped solid food product allows the consumer to feed their animals and fish maca in a commonly used and recognizable form, in sufficient quantities for the animal/fish to reap the health and fertility benefits of the maca. This is especially useful in the animal husbandry and fish breeding businesses, including those industries that breed for the use of food. As stated above, the prior art shows uses of fresh and dried maca to feed animals, the use is limited to the fresh maca, or the grain like dried tubers, and there is no mention of forming the maca containing food product into a shaped food item. Therefore, Claims 13 and 14 are allowable with Claim 1 for the reasons that Claim 1 is allowable, and the additional meaningful limitations that they recited.

More particularly, Claims 15, 18 - 21 specifically recite a shaped solid food product as in Claim 1 where the food product containing the maca is formed into a specific food item, such as pasta, frozen food and meals, canned foods or bakery items,

which is not remotely suggested by the admitted prior art , or any of the other art of record in this application. The prior art shows uses of fresh and dried maca to create a slurry like drink or pudding, however, the prior art does not disclose combining maca with other ingredients to create specific food item, such as pasta, frozen food and meals, canned foods or bakery items. Further, due to the unpalatable taste, smell and texture to non-Peruvians, this use, including maca in therapeutically useful concentrations, would not even be suggested by the prior art. The production of a shaped solid food product allows the consumer to ingest maca in a commonly recognizable and traditionally enjoyable form, in sufficient quantities to reap the health benefits of the maca. Therefore, Claims 15, 18 - 21 are allowable with Claim 1 for the reasons that Claim 1 is allowable, and the additional meaningful limitation that they recited.

Further, Claims 16 and 17 specifically recite preferable values of maca, by weight, that should preferably be combined in with the maca food product. The prior art does not disclose or even suggest any such measurements, the advantage of this disclosure is so the consumer can consume maca in sufficient quantities to reap the health benefits. Therefore, Claims 16 and 17 are allowable with Claim 1 for the reasons that Claim 1 is allowable, and the additional meaningful limitation that they recited.

Claims 4, 5, 9 and 10 depend from base Claim 3, and are therefore allowable with Claim 3 for the reasons that Claim 3 is allowable. Dependent Claims 4, 5, 9 and 10 are furthermore clearly and patentably distinguished from the art of record, and therefore allowable, by the additional meaningful limitations they recite.



More particularly, Claims 4 and 5 specifically recite a method of marketing as in Claim 3 where the maca is marketed to be added to the food before and after cooking, respectively, which is not remotely suggested by the admitted prior art or any of the other art of record in this application. As is seen in reference to Claim 1 above, the addition of maca to food stuff carries with it multiple changes to the mechanical and physical properties of the mixture, therefore addition of the maca as described in Claims 4 and 5 would not be obvious. Further, due to the unpalatable taste, smell and texture to non-Peruvians, this use, including maca in therapeutically useful concentrations, would not even be suggested by the prior art. The addition of the maca in sufficient quantities, whether before or after cooking, allows the consumer to reap the health benefits of the maca. Therefore, Claims 4 and 5 are allowable with Claim 3 for the reasons that Claim 3 is allowable, and the additional meaningful limitations that they recite.

Further, Claims 9 and 10 specifically recite preferable recommended values of maca consumption, which is not remotely suggested by the admitted prior art, or any of the other art of record in this application. The prior art does not disclose or even suggest any such measurements, how much of the product must be consumed in order to get the desired health benefits is important. Therefore, Claims 9 and 10 are allowable with Claim 3 for the reasons that Claim 3 is allowable, and the additional meaningful limitations that they recite.

Claims 7, 8, 22 and 23 depend from base Claim 6, and are therefore allowable with

Claim 6 for the reasons that Claim 6 is allowable. Dependent Claims 7, 8, 22 and 23 are furthermore clearly and patentably distinguished from the art of record, and therefore allowable, by the additional meaningful limitations they recite.

More particularly, Claim 7 specifically recites a method of marketing maca as in Claim 6 where the package of maca contains a dispensing spoon, which is not remotely suggested by the admitted prior art or any of the other art of record in this application. The prior art does not disclose or even suggest any packaging of maca, nor the use of a dispensing spoon, the prior art is limited to suggesting that once the maca is dried, it can be stored for periods of up to several years. The addition of the dispensing spoon allows a consumer to dispense desired quantities of the maca for beneficial advantage, without having to further measure the maca. This provides great convenience of use for the maca. As we all know, people will tend not to do things that are not convenient, therefore, by the addition of the dispensing spoon, people are more likely to use the product, and therefore more likely to reap the health benefits. Therefore, Claim 7 is allowable with Claim 6 for the reasons that Claim 6 is allowable, and the additional meaningful limitation that it recited.

Claim 8 specifically recites a method of marketing as in Claim 6 where the food product package contains maca mixed with grain or vegetable flour or a mixture thereof, which is not remotely suggested by the admitted prior art, or any of the other art of record in this application. The prior suggests using maca as a jam or beverage containing fruits or milk, however, no suggestion is made to mix maca with traditional flour. To the contrary, the practice is not performed due to the physical and mechanical

characteristics mentioned above. The addition of maca to a traditional flour provides the health benefits of maca in a flour that is palatable to the average non-Peruvian.

Therefore, Claim 8 is allowable with Claim 6 for the reasons that Claim 6 is allowable, and the additional meaningful limitation that it recites.

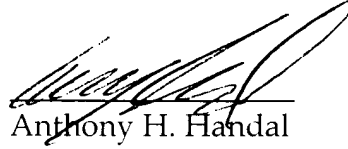
Claims 22 and 23 clearly recite a method of marketing as in Claim 6 with preferable recommended values of maca consumption, which is not remotely suggested by the admitted prior art, or any of the other art of record in this application. The measurements being important so the user consumes sufficient quantities of maca to reap the health benefits. Therefore, Claims 22 and 23 are allowable with Claim 6 for the reasons that Claim 6 is allowable, and the additional meaningful limitation that they recited.

The remaining art of record has been carefully considered, but does not appear to be remotely relevant to any of applicant's claims.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, as amended, is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

Respectfully submitted,

By:



Anthony H. Handal

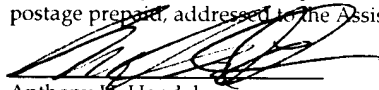
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I hereby certify that this correspondence is being deposited with the United State Postal Service as first class mail in an envelope, postage prepaid, addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on February 6, 2002



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**Version of Amended Specification with Markings to**

**Show Changes Made**

Page 10 Line 16 - Page 11 Line 14:

One embodiment of a package providing such desirable features is illustrated in the drawing Figure 1. A wide range of alternative packages and packaging features will be apparent to those skilled in the art. The maca container illustrated in Figure 1 comprises a cylindrical drum 10 having a screw-down lid 12, which for esthetic purposes can have an outer profile flush with that of drum 10. Drum 10 is preferably sealed by a frangible paper, plastic, metal or composite membrane 14 and ~~in-closes~~ encloses a sack 16 containing a desired quantity of powdered maca 18. In addition, a scoop 20, which is preferably a measuring scoop of stated capacity is included in drum 10. Sack 16 made the of any suitable material for example polyethylene, polypropylene or polyester film, is preferably transparent and is preferably sealed, for example by a twist tie 22. Optionally, container 10 may include, secured to the container, or to, or on a container label, or within the container, instructions for use of maca, optionally including recipes such as those described herein, one or more redeemable coupons, and contact information for obtaining information regarding maca and its use, for example telephone number, email web or postal address, and the like. Alternatively, some or all of such materials can be printed on the outside of the container or on a label around the container.

Page 18 Lines 41 - 42:

## EXAMPLE 28

~~Mac~~ Maca Dog Treats

Page 19 Lines 12 - 13:

## EXAMPLE 29

~~Mac~~ Maca Cat Cookies

Page 19 Lines 30 - 31:

## EXAMPLE 30

~~Mac~~ Maca Horse Nuggets

Page 20 Line 43 - Page 21 Line 4:

## EXAMPLE 33

Maca dough

Comparative Example B is repeated using a mixture of one part maca powder and one part ~~red flower~~ bread flour in place of the ~~breadth are~~ bread flour of comparative example B. Surprisingly, the egg white dough exhibits significantly more elasticity ~~that~~ than the water-based dough. Such elasticity is desirable in structurally integrating the maca into the end-product foodstuff. Also, good elasticity is associated with a lighter bread. It may be theorized, although the invention is not bound by such theory, that the maca proteins, which are a prominent component of maca, permit cross-linking with egg white albumen to provide the kind of molecular structure commonly associated with elasticity.

**Version of Amended Claim(s) with Markings to Show Changes Made**

3 (amended). A method of marketing a nutritional supplement comprising offering for sale packages of dried maca, each package containing at least 10 gm maca, optionally from about 50 to about 2,000 gm maca; and instructing consumers to ingest at least 2, ~~preferably 5 and more preferably 20~~ grams of maca per day.

6 (amended). A bulk package of dried dispensable, pourable maca powder, or maca powder mixture, the package containing at least 10 gm maca, optionally from about 50 to about 2,000 gm maca and including instructions to consumers to ingest at least 2, ~~preferably 5 and more preferably 20~~ grams of maca per day.